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AUTHOR Hohn, Alisabeth M.
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ABSTRACT

Whether students of various ages reported different self-perceptions of their writing because of survey design effects was studied. As part of a writing performance assessment, 1,972 students in an urban/suburban school district in grades 3 (n=736), 6 (n=636), and 9 (n=600) completed a brief self-perception survey that contained 5 items measuring students' perceived competence in writing. Students were randomly assigned to answer questions or to respond to statements regarding their beliefs about themselves as writers. Both versions of the survey contains response options that were ordered from positive to negative for all items, and items were presented in the same order on both versions. A univariate analysis that controlled for gender showed a two-way interaction between grade level and survey format. Students rated themselves higher on the question than statement format at all grade levels, but the difference between groups increased with the age of the student. Older students generated more accurate estimates of their competence than did younger students, but overall the correlations between perceived competence and overall score on the writing assessment were low. These results indicate that, by acknowledging the potential effects of survey design decision on data interpretation, researchers will improve the validity of their inferences in developmental studies as well as improving the comparability of data across researchers. (Contains 1 figure, 2 tables, and 12 references.) (SLD)

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Effects of Survey Format on Perceived Competence in Writing: A developmental Study

Alisabeth M. Hohn

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Effects of survey format on perceived competence in writing:
A developmental study

2001 Annual Meeting of the American Educational Research Association (Seattle, WA)

Alisabeth M. Hohn, Ph.D.
Academy School District 20 – Colorado Springs, CO
ahohn@d20.co.edu

Objective

To examine whether students of various ages report different writing self-perceptions due to survey design effects.

Background

In 1976, Shavelson, Hubner, and Stanton proposed a multidimensional and hierarchical model of self-concept. Since that time, hundreds of survey-based studies exploring the nature of students' academic self-concept have been reported in the educational psychology literature. These studies tend to fall into two categories, those that further investigate the notions of multidimensionality and hierarchy, and those that examine the relationship between self-perceptions and achievement.

Marsh and his colleagues have focused attention on the structure and specificity of academic self-perceptions (e.g., Marsh, Byrne, & Shavelson (1988), Visopel (1995)). While Eccles, Dweck and their colleagues have spend the better part of two decades studying the relationship between academic self-perceptions and other motivation variables that impact achievement (e.g., Dweck & Elliott (1983), Eccles, Wigfield, Harold, & Blumenfeld (1993), Gottfried (1990), Pintrich (2000)).

These researchers have made significant and practical contributions to the field because of their sustained efforts over many years. These studies show, for example, that academic self-concept becomes more differentiated over time, and that the relationship between motivation and achievement is shaped by the types of feedback students receive about their performance. An examination of the self-concept and motivation literature as a whole reveals that these researchers *tend to use the same survey design within their work across time, but there is considerable variation in survey formats employed across researchers.*

The survey research literature suggests that *survey format decisions are not trivial, and that changing the structure of an instrument may alter its reliability and validity* (e.g., Fowler, 1993, 1995; Schuman & Presser, 1981). In other words, we may draw different conclusions depending on the format selected. *Little attention in the achievement motivation literature is paid to systematic consideration of survey format decisions and acknowledgment of the possible effects of these decisions on results is rarely made.*

On the other hand, the survey research literature is notably lacking in studies of survey design effects in non-adult populations. For example, do children respond differently than adults to statements with agree-disagree type scales than to items posed as questions? Are children more likely to choose responses that are the first ones presented in a list than are adults? Because surveys are commonly used in research with children, adolescents, and adults, these are potentially fruitful areas of inquiry.

Presented here, is the second in a series of studies designed to answer these types of questions. As part of an initial study of 320 college students, Hohn (1996) found that participants responded more reliably to items in question format than to agree-disagree items. Also, question formatted items were more predictive of grades than agree-disagree items. The study reported here considers item format from a *developmental perspective*. Do the same effects occur with 3rd, 6th, and 9th graders as with adults?

Method

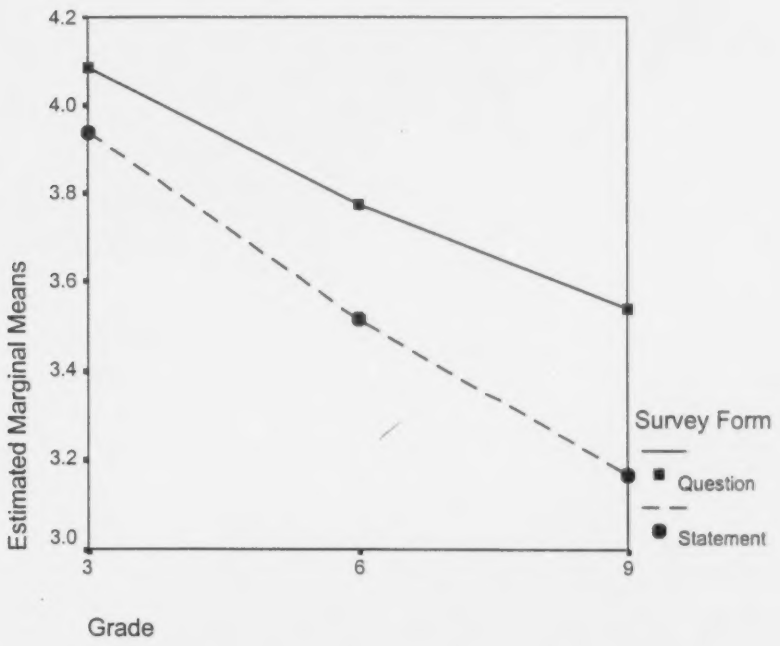
As part of a writing performance assessment, 1972 students in an urban/suburban school district in grades 3 (n=736), 6 (n=636), and 9 (n=600) completed a brief writing self-perception survey. The survey contained 13 items, the last 5 of which measured perceived competence in writing. Students were randomly assigned to answer questions or respond to statements regarding their beliefs about themselves as writers. Both versions of the survey included response options that were ordered from positive to negative for all items. Items were presented in the same order on both versions of the survey.

Results

Question 1: How do students of different ages rate their writing self-perceptions given two versions of the survey (question format vs. agree-disagree to statements)?

A univariate analysis of variance controlling for gender effects showed a two-way interaction between grade level and survey format. Students rated themselves higher on the question than statement format at all grade levels, but the difference between the groups increased with the age of the student.

Figure 1: Average writing self-perceptions by grade and survey format



Question 2: Which format is more predictive of achievement?

Table 1 below shows internal consistency reliability estimates among the five items computed for each grade level and survey format. Reliabilities were not especially high, but were similar across grade levels and formats.

Table 1: Internal Consistency Reliability Estimates by Grade for Survey Formats

Grade Levels	Question	Statement
Grade 3	.66 (n=357)	.65 (n=349)
Grade 6	.67 (n=310)	.60 (n=308)
Grade 9	.61 (n=302)	.67 (n=281)

Table 2 shows the correlation between perceived competence and an overall score on the writing assessment administered just before the survey was completed. Consistent with other findings in the developmental self-perception literature, older students generated more accurate estimates of their competence than did younger students. Overall the correlations were low, however. It is unknown why 9th graders were so inaccurate in rating themselves using the statement formatted items.

Table 2: Correlation between Writing self-perceptions and Actual Performance by Grade for Survey Formats

Grade Levels	Question	Statement
Grade 3	.15 (n=370)	.09 (n=359)
Grade 6	.36 (n=314)	.23 (n=315)
Grade 9	.32 (n=303)	.09 (n=284)

Conclusions

The study reported here isolates a particular feature of survey design, namely the type of stem (statement vs. question). Many other survey design features deserve attention in the developmental literature. A few of these include: stem wordings (positive, neutral, negative), response option order (all positive to negative, all negative to positive, some reverse keyed items), and item groupings within a survey (all items about the same topic grouped together

or items randomly ordered). By acknowledging the potential effects of survey design decisions on data interpretations, researchers will improve the validity of their inferences in developmental studies as well as improving the comparability of data across researchers.

Self-perceptions in academic domains are studied frequently by educational researchers. These findings suggest that all survey formats are not equivalent in a developmental context. One could easily draw different conclusions about students' ability to accurately self-assess depending on one's assumptions regarding survey format. Therefore, we may be more prone to drawing erroneous conclusions in the theory-building process unless further study of these effects is undertaken.

References

Dweck, C. S., & Elliott, E. S., (1983). Achievement Motivation. In E. M. Hetherington (Ed.), P. H. Mussen (Series Ed.), Handbook of child psychology: Vol. 4, Socialization, personality, and social development (pp. 643-691). New York: Wiley.

Eccles, J., Wigfield, A., Harold, R. D. & Blumenfeld, P. (1993). Age and gender differences in children's self- and task perceptions during elementary school. Child Development, 64, 830-847.

Fowler, F. J. (1995). Applied social research methods series: Vol. 38, Improving survey questions. Thousand Oaks, CA: Sage.

Fowler, F. J. (1993). Applied social research methods series: Vol. 1, Survey research methods. Newbury Park, CA: Sage.

Harter, S. (1990). Issues in the assessment of the self-concept of children and adolescents. In A. M. LaGreca (Ed.) Through the eyes of a child: Obtaining self-reports from children and adolescents. Boston: Allyn & Bacon.

Hohn, A.M. (1996). The impact of survey format and context on academic self-perceptions. Unpublished doctoral dissertation. The Ohio State University, Columbus.

Marsh, H. W., Byrne, B. M., & Shavelson, R. J. (1988). A multifaceted academic self-concept: Its hierarchical structure and its relation to academic achievement.

Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. Journal of Educational Psychology, 92, 544-555.

Gottfried, A. E. (1990). Academic intrinsic motivation in young elementary school children, Journal of Educational Psychology, 82, 525-538.

Schuman, H., & Presser, S. (1981). Questions and answers in attitude surveys. New York: Academic Press.

Shavelson, R. J., Hubner, J. J., and Stanton, G. C. (1976). Self-Concept: Validation of construct interpretations, Review of Educational Research, 46, 407-441.

Vispoel, W. P. (1995). Self-concept in artistic domains: An extension of the Shavelson, Hubner and Stanton (1976) model. Journal of Educational Psychology, 87, 134-153.